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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Y. MORI, et al.

Application No.: 09/884,908

Filed: June 21, 2001

For: ORGANIC ELECTROLUMINESCENT DISPLAY

Art Unit: 2879

Examiner: J. R. Phinney

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REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 5, 2004

Sir:

In response to the Office Action dated July 3, 2003, reconsideration and allowance of claims 1-3, 5 and 6 is respectfully requested.

Before turning to the distinctions of the pending claims over the cited prior art, a brief review of the features of the claimed invention will be provided. As discussed on page 2 of the specification, a problem exists in organic electroluminescent displays that as the light emission luminance of the organic electroluminescent device increases, the temperature also increases. This leads to a decrease in the light emission efficiency and shortens the life time of the device. (e.g. see paragraphs [0005]-[0007]. Accordingly, the present invention is directed to providing heat radiating liquid to suppress the generation of heat, as discussed on page 2 of the specification.

More specifically, referring to Fig. 1B, it can be seen that a heat radiating liquid 7 is provided in a space within a housing 5 in which an organic light emitting layer 2 is provided with electrodes 3 and 4 on opposite ends thereof. However, the present invention goes beyond merely providing a heat radiating liquid for the organic light emitting layer. In particular, the present invention is directed to providing a specific upper limit for water which is contained as an impurity in the heat radiating liquid. For example, as discussed in paragraph [0037] of the specification:

"Here, in the case that water is mixed into the inside of the heat radiation material in a liquid form as impurity, when a quantity of water as the impurity is large, it gives rise to an influence that a large number of dark spots (non-luminance points) are present. Accordingly, it is preferable that with respect to the heat radiation material which can be used in the present invention, a quantity of water which is contained in the heat radiation material is impurity amounts of not more than 100 ppm by weight ratio."

Thus, the present invention, as defined by each of the independent claims 1, 3 and 5, specifically defines this feature that water is contained as an impurity in the heat radiating liquid, but the amount of water is limited to avoid the problem of dark spots in the organic electroluminescent display.

Reconsideration and allowance of claims 1 and 2 over USP 5,821,692 to Rogers is respectfully requested. Independent claim 1 specifically defines the above noted feature that the heat radiating liquid contains water but only in an amount not greater than 100 ppm. As recognized in the Office Action:

"Rogers fails to exemplify that the liquid should contain specifically less than 100 ppm water."

The Office Action goes on, however, to argue that since column 3, lines 26-33 of Rogers suggests that the hydrophobic, fluorinated carbon liquid should be used in

Rogers, which is an effective barrier to water, it would be obvious to minimize the water content of Rogers.

In response, Applicants respectfully submit that whether or not Rogers suggests minimizing the water content, nothing in Rogers suggests any recognition of the criticality of permitting the water contained as an impurity to be no greater than 100 ppm. In essence, the present invention permits the existence of water as an impurity, but specifically limits the amount of water to being not greater than 100 ppm. The fact that water can be permitted as an impurity as long as its amount is not greater than 100 ppm is completely absent from the Rogers patent. Basically, how could one arrive at this specific upper limit for water with knowledge of nothing other than Rogers? Essentially, the only motivation for arriving at this claim limitation of no more than 100 ppm is the Applicants own disclosure. However, it is well recognized in the case law that reliance on the Applicants own disclosure for motivation to modify a reference is improper.

To this end, the Examiner's attention is directed to the Board of Appeal Decision in Ex parte Gerlach, 212 USPQ 471. In that case, the Examiner was seeking to modify the teachings of a reference to arrive at the particular limitation of "the width of each hook base...increasing from the free end thereof toward its associated lamella segment." In response to the Examiner's proposed modification, the Board stated:

"The prior art relied on by the Examiner shows coil hooks of constant width from the free end to the associated lamella segment. The Examiner finds the claim shape would have been obvious urging that "it is obvious for one skill in the art to form each hook base of any desired shape...since this is within the capability of such a person." Thus, the Examiner equates that which is in the capabilities of one skilled in the art with obviousness. Such is not the law. There is nothing in the statutes or

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the case law which makes "that which is within the capabilities of one skilled in the art" synonymous with obviousness."

The Board went on to state that:

"The Examiner provides no reason why, absent the instant disclosure, one of ordinary skill in the art would be motivated to change the shape of quail hooks of Hancock or the German patent and we can conceive of no reason."

It is respectfully requested that this is the same sort of modification being proposed in the present instance. Although Rogers may have had some desire to decrease moisture, there is simply no recognition of the criticality of the limitation set forth in the claims. In essence, it is respectfully submitted that the argument presented in the Office Action represents the same type of argument based on what is supposedly within the capabilities of a person of ordinary skill in the art. As noted in Gerlach, this is not the test of patentability for obviousness. Therefore, reconsideration and removal of the rejection of claims 1 and 2 over Rogers is respectfully requested.

Reconsideration and allowance of claims 1 and 3 over USP 4,734,338 to Eguchi is also respectfully requested. Eguchi represents another example of a general teaching of providing a liquid in a space around an electroluminescent element. In this case, a silicone oil 42 is provided in an electroluminescent cell 43. This reference teaches that the silicone oil 42 should be purified, degasified and dried (e.g. see column 3, lines 27-33). However, again, there is not suggestion in Eguchi of permitting water as an impurity as long as the amount does not exceed 100 ppm. Again, the question needs to be asked how would one arrive at this limitation from Eguchi? And, once again, the only answer is the Applicants own

disclosure. As noted in the case law cited above, it is completely inappropriate to use the Applicants' own teaching for this purpose. This same principle has been set forth by the CAFC in the case of In re Lee, 61 USPQ 2d 1430 in stating:

"This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been lead to this combination of references, simply to "use that which the inventor taught against its teacher." 61 USPQ 2d at 1434.

Since the only recognition of the criticality of the limitation regarding the maximum amount of water is the Applicants' own disclosure, it is respectfully submitted that relying on Eguchi to meet the terms of claims 1 and 2 falls directly within the prohibition set forth in the case of In re Lee (noting that this same argument applies for the rejections based on Rogers). Therefore, reconsideration and allowance of claims 1 and 3 over Eguchi is also respectfully requested.

Reconsideration and allowance of claims 5 and 6 over USP 5,189,405 to Yamashita in view of Rogers is also respectfully requested. Regarding this, Yamashita adds nothing to the above noted shortcomings of Rogers to arrive at the features set forth in claims 5 and 6. Once again, these claims define the critical limitation of the amount of water being not greater than 100 ppm. And, once again, Yamashita lacks any recognition of this critical limitation. Therefore, the same arguments set forth above with regard to the Rogers and Eguchi references apply with regard to the rejection of claims 5 and 6 over the combination of Yamashita and Rogers. Again, Yamashita is relied on simply as a general teaching that "the water concentration should be kept to a minimum within the housing in order to prevent damage to the EL device." (See paragraph 5 of the Office Action.) As such, as

noted above with regard to the other cited prior art, whether or not Yamashita had a general concept of reducing the amount of moisture is not the issue. The issue is recognition of the critical amount of water which can be permitted without damaging the device. Yamashita, like Rogers and Eguchi, is completely devoid of this recognition and this claimed feature. Therefore, reconsideration and allowance of claims 5 and 6 over the combination of Yamashita and Rogers is also respectfully requested.

For the reasons set forth above, allowance of all of claims 1-3, 5 and 6 is respectfully requested.

In addition to the above points, it is noted that Applicants are filing herewith a Japanese patent document 09-115664 in an IDS being filed under 37 CFR 1.56 (to the inventor Kazama). Regarding this, it is noted that the Kazama disclosure is believed to be cumulative in essentially teaching the same type of general device set forth in the references to Rogers and Eguchi already cited in the Office Action. Specifically, Kazama simply teaches an insulating liquid 23 filled into a sealed space, but is completely devoid of the recognition of the amount of water contained as an impurity in the insulating liquid being kept to no more than 100 ppm. As such, it is believed that this is simply cumulative prior art.

It is also noted that this Japanese patent document to Kazama has been cited in a counterpart Korean patent application to the present application. Regarding this, the claims in the Korean patent application which contain the limitation of the amount of water being not greater than 100 ppm have been indicated as allowable in the Korean case, thereby serving as a recognition by the Korean patent Examiner of the patentable distinction of this feature over the general teachings of Kazama.

If the Examiner believes that there are any other points which may be clarified or otherwise disposed of either by telephone discussion or by personal interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Antonelli, Terry, Stout & Kraus, LLP Deposit Account No. 01-2135 (Docket No. 501.40272X00), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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By



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